

AMENDMENT TO THE CLAIMS

Please **AMEND** claims 1, 31, and 33 as follows

Please **CANCEL** claims 4-6 and 9-12 without prejudice or disclaimer.

Please **ADD** claims 34-40 as follows.

A copy of all pending claims (including status identifiers) is provided below.

1. (Currently Amended) A device for connecting and locking building boards comprising a top side and a bottom side, having a core made of wood material and provided with a groove on at least two opposite side edges, comprising an insert intended for locking purposes, which insert can be inserted into the groove of one of the side edges, the boards being connected by substantially horizontal displacement one toward the other, wherein the insert is provided with one resilient lip extending upward from a first side edge directed toward the top side of the insert, and another resilient lip extending downward from a second side edge directed toward the bottom side of the insert, and

wherein at least one of the one resilient lip and the another resilient lip compresses toward a center of the insert and then springs back out from the center of the insert when the boards are connected by the substantially horizontal displacement,

the insert comprises:

a first upward facing surface;

a second upward facing surface connected to, and vertically offset from, the first upward facing surface by a first step;

a first downward facing surface;

a second downward facing surface connected to, and vertically offset from, the first downward facing surface by a second step;

the first side edge comprises the second upward facing surface and the first downward facing surface;

the second side edge comprises the first upward facing surface and the second downward facing surface;

the one resilient lip extends upward from the second upward facing surface; and

the another resilient lip extends downward from the second downward facing surface,

wherein each resilient lip has a tip running obliquely to the top side and bottom side,
which tip, for locking, cooperates with an obliquely running edge,
the insert is plastic,
the insert has in its core at least one cavity at a center of the insert,
the angle of inclination between the obliquely running edge measures between 90° and
135°,
the thickness of the insert measures 1.5-5 mm,
the depth of penetration of the insert into the groove is 3-8 mm, and
the flexural modulus of the plastic is 1000-7000 N/mm².

2. (Previously Presented) The device as claimed in claim 1, wherein the one and another resilient lips are directed in opposite directions.

3. - 6. (Canceled)

7. (Previously Presented) The device as claimed in claim 1, wherein the insert has midway between the one and another resilient lips a projection which rests on a shoulder, running parallel to the bottom side of the bottom lip of the groove.

8. (Previously Presented) The device as claimed in claim 1, wherein when the building boards are mutually connected, the insert is essentially fully surrounded in its peripheral contour by the core material of the boards.

9. – 12. (Canceled)

13. (Previously Presented) The device as claimed in claim 1, wherein the board is provided on one side edge with a tongue pointing substantially in the transverse direction and on the other side edge with a groove corresponding thereto.

14. (Previously Presented) The device as claimed in claim 1, wherein the side edges of the insert taper outward.

15. (Previously Presented) The device as claimed in claim 14, wherein the side edges of the insert are rounded.

16. (Previously Presented) The device as claimed in claim 14, wherein the side edges of the insert run conically.

17. (Previously Presented) The device as claimed in claim 1, wherein the insert is inserted into a groove at the factory.

18. (Previously Presented) The device as claimed in claim 17, wherein the insert is permanently connected to the groove of one of the side edges.

19. (Previously Presented) The device as claimed in claim 18, wherein the insert is glued in place.

20. (Previously Presented) The device as claimed in claim 1, wherein the grooves are cut with a fixed tool past which the boards are led.

21. (Previously Presented) The device as claimed in claim 1, wherein:
the one resilient lip extends from the first side edge toward a center of the insert and has a length greater than half the distance between the first side edge and the center of the insert, and
the another resilient lip extends from the second side edge toward the center of the insert and has a length greater than half the distance between the second side edge and the center of the insert.

22. (Previously Presented) The device as claimed in claim 21, wherein each of the one and another resilient lips includes:

a fixed end attached to a body of the insert,
a free end opposite the fixed end, and

an oblique tip at the free end, which, for locking, is structured and arranged to cooperate with an obliquely running edge of the building board.

23. (Previously Presented) The device as claimed in claim 21, wherein the insert comprises:

an upper surface step-shaped profile that allows the first resilient lip to be compressed;
and

a lower surface step-shaped profile that allows the second resilient lip to be compressed.

24. (Previously Presented) The device as claimed in claim 1, wherein when the building boards are mutually connected:

the insert is essentially fully surrounded in its peripheral contour by the core material of the building boards, and

an upper surface of the insert abuts a lip of one of the building boards, the lip defining a groove that receives a tongue of another one of the building boards.

25. – 27. (Canceled)

28. (Previously Presented) The device as claimed in claim 1, wherein:

the one resilient lip extending upward from the first side edge is the only lip that extends upward from the first side edge, and

the another resilient lip extending downward from the second side edge is the only lip that extends downward from the second side edge.

29. (Previously Presented) The device as claimed in claim 28, wherein:

each resilient lip has a tip running obliquely to the top side and bottom side, the tip, for locking, cooperates with an obliquely running edge,

when the boards are mutually connected, the insert is essentially fully surrounded in its peripheral contour by the core made of wood material of the boards,

the insert comprises a core having at least one cavity, and

the board is provided on one side edge with a tongue pointing substantially in the transverse direction and on the other side edge with a groove corresponding thereto.

30. (Previously Presented) The device as claimed in claim 1, wherein:
the one resilient lip is the only lip that extends from the first side edge, and
the another resilient lip is the only lip that extends from the second side edge.

31. (Currently Amended) ~~The device as claimed in claim 1~~ A device for connecting and locking building boards comprising a top side and a bottom side, having a core made of wood material and provided with a groove on at least two opposite side edges, comprising an insert intended for locking purposes, which insert can be inserted into the groove of one of the side edges, the boards being connected by substantially horizontal displacement one toward the other, wherein the insert is provided with one resilient lip extending upward from a first side edge directed toward the top side of the insert, and another resilient lip extending downward from a second side edge directed toward the bottom side of the insert, and

wherein at least one of the one resilient lip and the another resilient lip compresses toward a center of the insert and then springs back out from the center of the insert when the boards are connected by the substantially horizontal displacement,

the insert comprises:

a first upward facing surface;

a second upward facing surface connected to, and vertically offset from, the first upward facing surface by a first step;

a first downward facing surface;

a second downward facing surface connected to, and vertically offset from, the first downward facing surface by a second step;

the first side edge comprises the second upward facing surface and the first downward facing surface;

the second side edge comprises the first upward facing surface and the second downward facing surface;

the one resilient lip extends upward from the second upward facing surface; and

the another resilient lip extends downward from the second downward facing surface,
wherein when the boards are mutually connected:

an upper surface of the top side of the insert contacts a lip or tongue of a first one of the boards, and

the upper surface of the top side of the insert and the lip or tongue of the first one of the boards are disposed within the groove of a second one of the boards.

32. (Canceled)

33. (Currently Amended) A device for connecting and locking first and second building boards, the first and second building boards comprising respective grooves into which the device is configured to be inserted for the connecting and locking, the first and second building boards being connected by substantially horizontal displacement one toward the other, the device comprising:

a first upward facing surface;

a second upward facing surface connected to, and vertically offset from, the first upward facing surface by a first step comprising a first vertical wall extending from the first upward facing surface to the second upward facing surface;

a first downward facing surface;

a second downward facing surface connected to, and vertically offset from, the first downward facing surface by a second step comprising a second vertical wall extending from the first downward facing surface to the second downward facing surface;

a resilient lip extending upward from the second upward facing surface; and

another resilient lip extending downward from the second downward facing surface,

wherein at least one of the resilient lip and the another resilient lip compresses toward a center of the device and then springs back out from the center of the device when the boards are connected by the substantially horizontal displacement; and

horizontal locking of the boards is effectuated by respective tips of the resilient lip and the another resilient lip resting against respective edges of the respective grooves.

34. (New) The device as claimed in claim 33, further comprising a cavity in a core of the insert.

35. (New) The device as claimed in claim 34, wherein the cavity is at a center of the insert.

36. (New) The device as claimed in claim 35, wherein when the first and second building boards are mutually connected:

the first upward facing surface of the insert contacts a lip or tongue of the first building board, and

the first upward facing surface of the insert of the insert and the lip or tongue of the first building board are disposed within the groove of the second building board.

37. (New) The device as claimed in claim 36, wherein:

each resilient lip has a tip running obliquely to the top side and bottom side, which tip, for locking, cooperates with an obliquely running edge,

the insert is plastic,

the insert has in its core at least one cavity at a center of the insert,

the angle of inclination between the obliquely running edge measures between 90° and 135°,

the thickness of the insert measures 1.5-5 mm,

the depth of penetration of the insert into the groove is 3-8 mm, and

the flexural modulus of the plastic is 1000-7000 N/mm².

38. (New) The device as claimed in claim 1, wherein:

the first step comprises a first straight wall extending from the first upward facing surface to the second upward facing surface; and

the second step comprises a second straight wall extending from the first downward facing surface to the second downward facing surface.

39. (New) The device as claimed in claim 38, wherein when the first and second boards are mutually connected:

the first upward facing surface of the insert contacts a lip or tongue of the first board, and the first upward facing surface of the insert of the insert and the lip or tongue of the first board are disposed within the groove of the second board.

40. (New) The device as claimed in claim 31, wherein:

the first step comprises a first straight wall extending from the first upward facing surface to the second upward facing surface; and

the second step comprises a second straight wall extending from the first downward facing surface to the second downward facing surface.